

A New *Tachysphex* from Southeastern United States (Hymenoptera, Sphecidae)

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This new *Tachysphex* from coastal North Carolina and Florida is being described at this time so that a name will be available for F. E. Kurczewski's study of the behavioral characteristics of the North American species. I take pleasure in naming it for R. M. Bohart, University of California at Davis, whose current studies on larrine wasps are helping to clarify the confused and difficult taxonomy of the group.

Tachysphex boharti, new species

Tachysphex n. sp., Krombein, 1950. Jour. Elisha Mitchell Sci. Soc. 65: 267 (2 ♀♀; Kill Devil Hills, N. C.).—Krombein, 1953. Wasmann Jour. Biol. 10: 330 (3 ♀♀, 1 ♂; Kill Devil Hills, N. C.).—Krombein, 1953. Proc. Ent. Soc. Wash. 55: 132 (2 ♀♀; Kill Devil Hills, N. C.).

Tachysphex sp. No. 4, Krombein and Evans, 1955. Proc. Ent. Soc. Wash. 57: 231 (2 ♂♂; Arcadia, Fla.).

Holotype. ♀; Kill Devil Hills, Dare Co., NORTH CAROLINA; June 26, 1954 (K. V. Krombein) [U. S. National Museum, Type No. 66665].

Female. Length 7 mm, forewing 5 mm. Black, the following light red—entire abdomen, basal two-thirds of mandible, apical half of tegula, and hind femur and tibia; wing clear, the veins testaceous. Vestiture moderately dense, silvery and appressed on face below ocelli, thorax, legs, and across apices of first four abdominal terga, that on scutum with a slight golden cast.

Clypeus with small dense punctures on basal part, the apical bevel polished and with a few, scattered large punctures, the lip broadly and shallowly arched and with a small lateral notch; front with punctures a little larger and more separated than on base of clypeus; ratio of lengths of first three flagellar segments, least interocular distance, and clypeal breadth as 9:11:11:16:42.

Scutum shining, with small subcontiguous punctures; scutellum shining, the punctures a little larger and slightly more

separated; mesopleuron dull, with very fine close punctures; propodeum moderately granulose above, laterally with fine, close oblique rugulae.

Tarsal comb with individual bristles about three-fourths as long as basitarsus.

First four abdominal terga subshining, with delicate, close punctation; pygidium glossy, with a few, scattered small punctures, the apical angle about 30° .

Allotype. ♂; same data as type, but July 2, 1954 (K. V. Krombein) [USNM].

Male. Length 5 mm, forewing 3.5 mm. Colored as in female except hind femur and tibia, apex of third abdominal tergum, and fourth to seventh abdominal segments black, the tarsi somewhat reddened. Vestiture rather abraded, apparently quite similar to that of female, except fifth abdominal tergum also with an apical silvery band.

Clypeal bevel more punctate than in female, the lip poorly developed, and apical margin of median lobe narrower, more strongly rounded and without lateral notch; ratio of lengths of first three flagellar segments, least interocular distance, and clypeal breadth as 6:7:7:15:30.

Tarsal comb abraded (in some paratypes the bristles a little longer than apical width of basitarsus).

Genitalia: Setae of volsella and gonostyle moderately long, in a single row, those of volsella more numerous and minutely capitate; serrated crest of volsella with margin evenly rounded above, abrupt posteriorly; aedeagal teeth moderately large, closely grouped, 4 in number.

Paratypes. 15 ♀♀, 1 ♂; Kill Devil Hills, Dare Co., N. C.; May 24, 1952 (♀), June 23, 1954 (♀), June 26, 1950 (♂), June 27, 1954 (♀), June 28, 1954 (3 ♀♀), June 30, 1954 (3 ♀♀), July 1, 1954 (3 ♀♀), July 2, 1954 (3 ♀♀) (K. V. Krombein) [KVK]. 3 ♀♀; same locality, but July 22, 23, 26, 1962 (F. E. Kurczewski) [FEK]. 1 ♀; Salvo, Dare Co., N. C.; August 6, 1958 (K. V. Krombein) [KVK]. 1 ♀, 1 ♂; Arcadia, DeSoto Co., Fla.; March 31, 1954 (♂) and July 2, 1962 (♀) (K. V. Krombein) [KVK, USNM]. 6 ♀♀, 1 ♂; Arcadia, Fla.; March 27,

1957 (♀), March 30–April 1, 1954 (♂), April 27, 1955 (5 ♀♀) (H. E. and M. A. Evans; one of them labeled HEE 963) [CU]. 2 ♀♀; Arcadia, Fla.; June 30 and July 10, 1962 (F. E. Kurczewski) [FEK]. 2 ♀♀; Fort Pierce, St. Lucie Co., Fla.; July 16, 1962 (F. E. Kurczewski) [FEK]. 1 ♀, 1 ♂; Welaka, Putnam Co., Fla.; April 18–20 (♀) and May 1–4, 1955 (♂) (H. E. and M. A. Evans) [CU]. Paratypes have been placed in the collections of the U. S. National Museum, Academy of Natural Sciences of Philadelphia, Museum of Comparative Zoology, Cornell University, R. M. Bohart, F. E. Kurczewski, and the author. Female paratypes are 5.5 to 7.5 mm long and males range from 4.0 to 5.5 mm. The coloration is quite constant except that the third abdominal segment of the male may be entirely red or all black, and the hind legs of the female, especially of those from Florida, may be mostly or entirely dark.

Tachysphex tarsatus (Say) is the only other species in the southeastern United States in which the abdomen of the female may be entirely red. It is readily distinguished from *boharti* by being much larger, in lacking the relatively dense, appressed silvery vestiture, in having the mesopleuron granulose, and in the different ratio of length of flagellar segments and least interocular distance.

T. boharti is apparently restricted to sparsely vegetated sandy areas. Dates of capture in both North Carolina and Florida indicate definitely that there are two or more generations annually. I obtained a few notes on the biology at Kill Devil Hills 11 years ago. I observed a female (52452 A) on May 24, 1952, at 1331 hours, dragging a grasshopper nymph, slightly larger than herself, over the sandy barrens. Occasionally she made short leaps with her prey. After she had traveled a distance of about 3 meters, she came to her burrow entrance adjacent to a grass tuft and immediately pulled in her prey. I lost the wasp during my excavation of the nest, but captured her when she returned to the site a few minutes later. I also lost the course of the burrow in the loose sandy soil, but 5 cm below the surface I located a cell holding three grasshopper nymphs ranging from 6–7 mm in length. The nymphs were paralyzed, but exhibited

jerky reflex movements of the legs and palpi, and voided several fecal pellets during the following 24 hours. The wasp egg was attached transversely to the sternum of one of the nymphs between the fore coxae; the egg was injured during my excavation of the nest, for it shriveled up a day later. A. B. Gurney identified the prey as probably second- or third-instar nymphs of the acridid, *Psinidia fenestralis* (Serville).

H. E. Evans furnished a few biological notes on a female *boharti* (HEE 963). Inasmuch as they differ in several details from those I made, I quote them here with Dr. Evans' permission. "This wasp was seen at 3 P.M. on March 27th, 1957, on the sandflats along the Peace River at Arcadia, Florida. She was carrying a grasshopper over the ground, not flying, proceeding forward and grasping the hopper by the base of the antennae; the hopper was venter up. The hopper was larger than the wasp, so the wasp proceeded slowly and haltingly. She went one meter to her nest, the entrance to which was open. She put the hopper in the entrance, and pulled it in from the inside. In one and a half minutes she could be seen filling. The wasp was captured and the nest dug out. The egg was on the throat of the grasshopper; there was only one grasshopper in the cell. The burrow was 3 centimeters long, the cell only 1 centimeter beneath the surface of the sand. The larva did not develop to maturity because the grasshopper was consumed by mold a few days later. The grasshopper was a nymph of *Scirtetica marmorata picta* Scudder."